

WHAT IS CLAIMED IS:

1. A method of selectively removing volatile components from a composition, comprising:
coating a coating formulation onto a first substrate surface of a substrate, wherein the coating formulation comprises solvent, one or more volatile ingredients selected from the group consisting of liquid drugs, liquid excipients and mixtures thereof, and if the volatile ingredient is not therapeutically active, one or more drugs,
positioning at least a portion of the coated substrate between a condensing surface having a condensing surface temperature and a heating surface having a heating surface temperature that is greater than the condensing surface temperature, wherein the condensing surface is in a spaced apart, confronting relationship to the coated surface of the substrate and wherein the heated surface is in thermal contact with a second substrate surface opposite the first substrate surface; and
wherein the heated surface temperature and the condensing surface temperature are such that the positioning causes the solvent to be selectively removed from the portion of the coated substrate.
2. The method of claim 1, wherein substantially all of the resident volatile component remains in the portion of the coated substrate.
3. The method of claim 1, wherein the heating surface temperature is within about 20°C of the boiling point of the solvent having the lowest boiling point.
4. The method of claim 3, wherein the heating surface temperature is within about 10°C of the boiling point of the solvent having the lowest boiling point.

5. The method of claim 1, wherein the heating surface has a temperature gradient in which the heating surface temperature increases along the temperature gradient in the longitudinal direction of the heating surface, and wherein the positioning further comprises moving the substrate along the temperature gradient in the longitudinal direction of the heating surface so that successive portions of the substrate come into thermal contact with the heating surface.

6. The method of claim 1, wherein the positioning comprises positioning the substrate within about 1 cm of the condensing surface.

7. The method of claim 1, further comprising:
condensing the vapor on the condensing surface to create a condensate; and
removing the condensate from the condensing surface while the condensate remains in the liquid state.

8. The method of claim 7, further comprising recovering and collecting the condensate removed from the substrate.

9. The method of claim 1, wherein the solvent is acetone, ethanol, ethyl acetate, heptane, isopropanol, methanol, methyl ethyl ketone, toluene or mixtures thereof.

10. The method of claim 1, wherein the volatile ingredient is a liquid drug.

11. The method of claim 10, wherein the drug is nicotine, nitroglycerin or scopolamine.

12. The method of claim 1, wherein the volatile ingredient is a liquid excipient.

13. The method of claim 12, wherein the excipient is C₈-C₂₂ fatty acids, C₈-C₂₂ fatty alcohols, C₈-C₂₂ fatty diols, lower alkyl esters of C₈-C₂₂ fatty acids, di(lower)alkyl esters of C₈-C₂₂ fatty acids, monoglycerides of C₈-C₂₂ fatty acids, terpenes, tetraglycol, polyethylene glycol ether, polyethylene glycol, propylene glycol, 2-(2-ethoxyethoxy)ethanol, diethylene glycol monomethyl ether or mixtures thereof.

14. The method of claim 13, wherein the excipient is oleyl alcohol, lauryl alcohol, isopropyl myristate, ethyl oleate, methyl laurate, diisopropyl adipate, glyceryl monolaurate, terpeneol, tetraglycol, polyethylene glycol, propylene glycol, 2-(2-ethoxyethoxy)ethanol, diethylene glycol monomethyl ether or mixtures thereof.

15. The method of claim 1, wherein the drug is testosterone.

16. The method of claim 1, wherein the coated substrate is a transdermal drug delivery composition.

17. The method of claim 16, wherein the transdermal drug delivery composition further comprises an adhesive.

18. The method of claim 1, wherein the coating formulation further comprises an adhesive.

19. The method of claim 18, wherein the adhesive is an acrylate.

20. The method of claim 1, wherein the substrate comprises a release liner.

21. The method of claim 1, wherein the substrate comprises a backing film.

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22. A method of forming a transdermal drug delivery composition, comprising:

coating a coating formulation onto a first substrate surface of a substrate, wherein the coating formulation comprises solvent, one or more volatile ingredients selected from the group consisting of liquid drugs, liquid excipients and mixtures thereof, and if the volatile ingredient is not therapeutically active, one or more drugs,

positioning at least a portion of the coated substrate between a condensing surface having a condensing surface temperature and a heating surface having a heating surface temperature that is greater than the condensing surface temperature, wherein the condensing surface is in a spaced apart, confronting relationship to the coated surface of the substrate and wherein the heated surface is in thermal contact with a second substrate surface opposite the first substrate surface; and

wherein the heated surface temperature and the condensing surface temperature are such that the positioning causes the solvent to be selectively removed from the portion of the coated substrate such that substantially all of the resident volatile component remains in the portion of the coated substrate.